Office Action is respectfully requested. It is further requested that each of the presently pending claims be allowed and the application be passed to issue.

Rejection of Claims Under Section 101

Claims 1 through 20 were rejected as unpatentable under 35 U.S.C. § 101 on the grounds that:

> The Applicant's claimed invention does not fall within the technological arts because no form of technology is disclosed or claimed. The claims recite a process for calculating a score without utilizing a computer or computer-related technology.

Office Action at ¶ 3. The Applicant respectfully traverses this rejection for failure to establish a prima facie case.

The application and its claims are directed to a mode of acquiring and analyzing survey information, manifest as a system, method and article of manufacture for accomplishing the same. The Office Action states, without more, only that this application does not fall within the technological arts because "no form of technology is disclosed or claimed." As a threshold matter, this is not the case. The specification extensively discusses a "representative hardware environment on which the method" claimed "may be implemented." Figures 1 through 3 illustrate this technology. Disk storage units 200 are disclosed on which the article of

manufacture may be used and produced. Significant disclosure of program coding techniques is likewise set forth in the specification.

Moreover, it is respectfully noted that the claimed subject matter is statutory. The Patent Act defines the subject matter of patents as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter . . . may obtain a patent therefor.

35 U.S.C. § 101. The Supreme Court chose the expansive language of 35 U.S.C. § 101 to embrace "anything under the sun that is made by man." Diamond v. Chakrabarty, 447 U.S. 303, 308-09, 206 USQP 193, 197 (1980). The Federal Circuit concurred, noting that

> The plain and unambiguous meaning of section 101 is that any new and useful process . . . may be patented . . . . The use of the expansive term "any" in section 101 represents Congress's intent not to place any restrictions on the subject matter for which a patent may be obtained. . . . It is improper to read into section 101 limitations as to the subject matter that may be patented where the legislative history does not indicate that Congress clearly intended such limitations.

In re Alapatt, 33 F.3d 1526, 1542, 31 USPQ2d 1545, 1556 (Fed. Cir. 1994).

The Applicant has chosen statutory subject matter for its "System, method and article of manufacture." This application claims the traditional modes of a computer invention well known in the art, with claims directed to a new and useful process, a product or medium for storing the

process in the form of a computer program, and a system for executing the logic of the stored program embodying the process. Here, Claims 1 through 7 are directed to a process, in particular, a "method . . . comprising . . . steps." Claims 8 though 13 are directed to an article of manufacture, in particular, a "computer program product . . . comprising . . . computer code," with respect to which a program stored on a physical medium is usable to realize the execution of the computer code. Claims 14 through 20 are directed to machines and a network infrastructure, in particular, a "system . . . comprising . . . logic," in which a computer carries out the logic of a stored program.

Therefore, as is routine and common in the art of software invention, the specification clearly discloses and claims a computer system apparatus and a network infrastructure including products comprising program code (claims 14 through 20) stored on physical media (claims 8 through 13), which can be taken together to implement a software invention process (claims 1 through 7). Accordingly, the subject matter rejection on grounds of failure to claim an invention falling "within the technological arts" is respectfully traversed.

Further, the claims, directed both to machines, articles of manufacture and processes, do not recite processes "without using a computer or computer-related technology," in particular,

ranking of individuals having a particular attitude, behavior or demographic, results of the kind ordinarily used in the marketing of products. To the contrary, the claims are directed to, and the specification articulates at length, the use of a computer to provide a "useful, concrete and tangible result." Claims 8 through 20 are clearly statutory, because they are expressly limited to manufacture and machines having practical application. In re Alappat, 33 F.3d at 1544, 31 USPQ2d at 1557 ("the claimed invention as a whole is directed to a combination of interrelated elements which combine to form a machine"); State Street Bank, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 ("transformation of data . . . by a machine through a series of mathematical calculations . . .constitutes a practical application because it produces "a useful, concrete and tangible result").

In this case, individual data and information are identified and retrieved, with additional information obtained to derive a model for relating that information to obtain a useful, concrete and tangible result by "calculating a score for each individual" to indicate "a propensity of the individual to have a particular attitude, behavior, or demographic" to be used and relied upon for making marketing decisions.

Rejection of Claims Under Section 102

The Office Action rejected claims 1, 4 through 8, 11 through 15 and 18 through 20 under Section 102(e) as anticipated by Jacobi et al., U.S. Patent No. 6,317,722. Because anticipation only occurs only where each and every element of a claim is found in a single prior art reference, MPEP § 2131 (citing Verdegaal Bros. v. Union Oil Co of Ca., 814 F.2d 628, 631 (Fed. Cir. 1987)), and because several claimed elements are not disclosed in Jacobi et al., the rejection is traversed, and reconsideration is respectfully requested.

Jacobi et al. teaches a system for using electronic shopping carts to generate personal recommendations. The Office Action asserts that the elements of "identifying a plurality of individuals" and "retrieving first information on each of the individuals" set forth in Independent Claims 1, 8 and 15 are taught by recitation in Jacobi that a database of all users of the shopping cart system is maintained. The Office Action further assert that the element of "conducting a survey to collect second information from each of the individuals" is taught by the recitation in Jacobi permitting users to rate books according to a scale of 1 to 5. Jacobi nowhere teaches or suggests "conducting a survey to collect second information from each of the individuals." Rather, Jacobi disclosing only "provid[ing] the opportunity to rate individual book titles from a

list of popular titles" to all users, receiving data only from the self-selected users who choose to accept the opportunity. Second information in Jacobi is not collected by survey and, further, is not collected from "each person" identified in the step of identifying.

Further, the Office Action asserts that the recited Claims are anticipated by recitation in Jacobi to "generate[] recommendations [for a user] based exclusively on the purchase history and any item rating profile of the particular user." It is respectfully suggested that this teaches against the claimed invention. The first and second information, without more, cannot be the claimed model. The computation of aggregate information from first information alone, without more, is not a model relating first and second information. The mere formation of a "recommendation" for a user based exclusively on that particular user's purchase history does not teach or suggest the claimed step of "creating a model which defines a relationship between the first and second information" collected in the step of "conducting a survey." No model of the kind claimed herein is disclosed in Jacobi for relating first information to second information.

Further, the Office Action asserts that the recited claims are anticipated by recitation in Jacobi corresponding to Fig. 5 of that reference. Jacobi discloses computing a score computed using a customer's purchase or rating information, in connection with a "similar items table,"

which is computed "from purchase histories of the community of users," based upon "pre-specified popularity criteria" and weighted with respect to a "commonality index . . . value which indicates the relatedness of that item to the popular item . . . based on sales of the respective items." Neither is the commonality table based on sales a model relating first information to second information. As identified by the Office Action, the table does not compute a score based upon the survey information, and hence, Jacobi does not teach the step of "calculating a score for each individual based on the first information, the second information and the model, wherein the score indicates a propensity of the individual to have a particular attitude, behavior or demographic."

Accordingly, Dependent Claims 1, 4 through 7, 11 through 14 and 18 through 20, which include the limitations of their corresponding Independent Claims are not anticipated for the reasons set forth above.

The Office Action further rejects Dependent Claims 4, 11 and 18 as anticipated by reference to Figure 3 of Jacobi. Nowhere in Figure 3 is "first information on each of the individuals" "extracted from a list," as claimed herein. Figure 3 defines a means for computing aggregations of first information to produce "similar items table" that can be later used to

compute a score as an aggregation of "PURCHASE HISTORIES FOR ALL CUSTOMERS," nowhere recites the correspondence between elements of the table and identified individuals and, accordingly, does not constitute independent "first information on each of the individuals," as recited in these Dependent Claims.

The Office Action further rejects Dependent Claims 5, 12 and 19 as anticipated by reference to Figure 1 and column 8, lines 26-50 of Jacobi. These portions refer only to item ratings by users with respect to purchased items and other items based upon past experience with the item, such as "Liked it" and "Loved it." Ratings of books and items already reviewed do not correspond to any prospective "purchase intent" recited in the claims.

The Office Action further rejects Dependent Claims 6, 13 and 20 as anticipated by Jacobi, citing to the same portion the Office Action relied upon for anticipating the step of "computing a score," and not for the step of "creating a model." The present invention claims steps of "retrieving first information," "conducting a survey to collect second information," "creating a model which defines a relationship" among such information and "calculating a score for each individual." The rejected dependent claims additionally recite that "the model sets forth a plurality of characteristics and a weight of each of these characteristics for calculating the

score." The present invention utilizes multivariate statistical techniques to form a model to include the characteristics and magnitudes of characteristics, selected from or weighted between the claimed plurality of characteristics, that best predict individual attitude, behavior or purchase intent. It is respectfully suggested that the portion of Jacobi, assuming that Jacobi uses a survey-dependent model at all in computing a score (which it does not), relied upon here computes a weight for only one, and not a plurality, of characteristics.

The Office Action further rejects Dependent Claims 7 and 14 as anticipated by Jacobi, citing to the same portion the Office Action relied upon for anticipating the step of "computing a score." As discussed above, the recited portion computes product recommendations for a user by comparing purchase history (first information), recommendations if present (second information), and aggregated similar items data drawn from first information. It is respectfully suggested that the portion of Jacobi relied upon does not disclose a step of generating an equation from information for computing a score and that no equation set forth in the portion depends upon all of the first information, second information and the claimed model.

Rejection of Claims Under Section 103

The Office Action rejected claims 2, 3, 9, 10, 16 and 17 under Section 103(a) as being unpatentable over U.S. Patent No. 6,317,722, by Jacobi et al. in view of U.S. Patent No. 5,754,938, by Herz et al. Specifically, it asserted that Jacobi et al. teaches a method for calculating a score that measures the propensity of an individual to have a particular behavior, attitude or demographic, and that Herz et al. teaches sorting the individuals based on that score and enabling users to control third-party access to a user's profile. Hence, it concluded that it would have been obvious to an ordinarily-skilled artisan to combine the teachings of Herz et al. and Jacobi et al. to arrive at the instant invention.

Applicant respectfully traverses this rejection for failure to set forth a prima facie case of obviousness, because the prior art references taken together do not teach or suggest all claim limitations, no teaching or motivation can be found in the disparate references from distinct art areas to suggest their combination and the references themselves teach away from the combination. Further, none of the references, individually or taken together, teach or suggest a useful benefit of embodiments of the claimed invention, which is the creation of a model by multivariate means to determine those characteristics, and weightings between them, that are

most suitable for estimating individual propensities. MPEP § 2143. Furthermore, the invention must be considered as a whole, at the time the invention was made, without the benefit of impermissible hindsight. MPEP § 2141.01, see generally, Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143, n.5, 229 USPQ 182, 187, n.5 (Fed. Cir. 1985).

The Hertz et al. patent relates only to an information retrieval system for keyword searches and is unrelated to the art of using and analyzing survey information to determine consumer propensities to possess a particular behavior, attitude or demographic. As mentioned above, Jacobi et al. teaches only use of information gathered from its web site based on past purchases and voluntary behavior of self-selected web site users—and does not teach the use of user surveys in combination with a user database to form a model for multivariate analysis. Additionally, there is nothing in the references that shows a reasonable expectation of success, nor is there a suggestion or motivation to combine or modify the teachings in the reference in arriving at the instant invention.

1. The Prior Art Does Not Suggest Or Provide A Motivation to Combine the Teachings

The instant invention relates to a method of gathering information about particular consumers from voluntary consumer surveys, using a mathematical equation to calculate a score

based on user-defined criteria. Herz et al. is an information retrieval and delivery system that gathers information through passive monitoring of the articles online computer users access. Jacobi et al. discloses a computerized method of making recommendations of products or services to computer users without needing the consumers to rate such goods or services. There is a fundamental difference between actively collecting information via voluntary consumer surveys and passively monitoring consumer activity based on online computer usage. As such, the system disclosed by Herz et al. does not suggest or teach the use of its disclosure in connection with surveys from consumers. The premise of the Herz et al. patent is to gather information without affirmatively asking for information; to the contrary, the objective is to collect information passively by electronically "observing" computer users' activities while online to determine such users' future behavior. Jacobi et al. discloses a method that is specifically designed to avoid having consumers actually "rate" items at all. The instant invention, in contrast, specifically requires conducting a survey from an identified universe of individuals—something that both Herz et al. and Jacobi et al. avoid. In fact, Herz et al. affirmatively teaches away from using surveys. The stated objective is to obviate the need for

users to "rate" goods or services to provide an "information retrieval system that is largely or entirely passive." (Herz et al. col. 2 lines 20-21).

2. The References Do Not Show a Reasonable Expectation of Success

The prior art teaches against the use of user-driven information gathering techniques. The instant invention relates to gathering information via use of user surveys. There would be no reasonable expectation of success in using a user survey when the object of the invention is to remove the user from the information gathering process.

Herz et al. teaches

> There is a need for an information retrieval system that is largely or entirely passive, unobtrusive, undemanding of the user[,] [and] [p]resent information retrieval systems require the user to specify the desired information retrieval behavior through cumbersome interfaces.

(Herz et al., col. 2, lns. 20-22, 24-26). This expressly teaches against the use of direct consumer surveys. There would be no reasonable expectation of success in achieving the object of the prior art, avoiding the need for direct user input, in using direct consumer surveys. Therefore, this element is clearly not met.

3. The Prior Art References Do Not Teach or Suggest All Claim Limitations

Each claim rejected as obvious here depends from one of Independent Claims 1, 8 or 15, and therefore includes each and every limitation of its corresponding parent claim. As set forth in the response to rejections under Section 102, Jacobi does not teach or suggest all of the recited limitations of (a) identifying a plurality of individuals, (b) retrieving first information on each of the individuals; (c) conducting a survey to collect second information from each of the individuals; (d) creating a model which defines a relationship between the first and second information; and (e) calculating a score for each individual based on the first information, the second information and the model, wherein the score indicates a propensity of the individual to have a particular attitude, behavior or demographic. Accordingly, it is respectfully suggested that the rejection be reconsidered therefore.

Moreover, Dependent Claims 3, 10 and 17 recite the grouping of individuals into households, and the identity of a head individual of the household is maintained confidential. While Hertz teaches an information retrieval technique known as clustering to facilitate relevance feedback, that disclosure has nothing to do with the structure of the present invention. Nowhere in Hertz, which is in no way concerned with demographics of its users, is it taught or

suggested to group an identified plurality of individuals into households, further, nowhere in Hertz is it taught or suggested that said head of household be maintained confidentially. Accordingly, it is respectfully suggested that the rejection of these claims be reconsidered.

As can be seen from the above, the prior art teaches against the instant invention. The prior art seeks to avoid interacting with the user, through "cumbersome interfaces" or otherwise. The instant invention teaches "conducting a survey to collect [ ] information" from individuals. These two objectives are diametrically opposed. There is no way that the prior art can teach avoiding user contact and also teach the use of direct consumer surveys.

Jacobi et al. teaches item-mapping according to a process that identifies correlations between user interests and particular items. (Jacobi et al., col. 2 lns. 59-61). These correlations are drawn from, among other things, the similarities and differences between items users have purchases in the past. (Jacobi et al., col. 2 ln. 64). Herz et al. teaches the use of the process of "electronic identification of desirable objects, such as news articles, in an electronic media environment." (Herz et al., abstract). Neither prior art reference teaches manually administering a survey—both teach away from this and instead teach automating this process without direct

user input. Thus, the prior art does not suggest or teach all claim limitations of the instant invention.

References Made of Record but Not Applied:

The references made of record and considered by the Office to be "pertinent to applicant's disclosure" have been reviewed. Applicant notes that none of these references, taken together or individually, either teach or suggest any of the classes set forth in the present application.

CONCLUSION

In light of the foregoing, it is respectfully requested that the rejection be withdrawn and the application allowed.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner of Patents and Trademarks, c/o Technology Center 2100, Washington, DC, 20231, on the date set forth below.

Andrew C. Greenberg, Attorney of Record — October 27, 2004 — Date